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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,609	10/20/2003	Hirokazu Komai	Q77989	4685

7590 08/26/2005

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EXAMINER

HAUGLAND, SCOTT J

ART UNIT	PAPER NUMBER
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3654

DATE MAILED: 08/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/687,609	Applicant(s) KOMAI, HIROKAZU	
	Examiner Scott Haugland	Art Unit 3654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2005.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☒ Claim(s) 6, 12 and 18 is/are allowed.
 6) ☒ Claim(s) 1-5, 7-11, 13-17 and 19 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 20 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some c) ☐ None of:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4, 7-10, and 13-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not clear from the claims how the "next winding length" recited in claim 1, lines 15-16, claim 1, lines 18-19, and claim 2, line 6 or the "next plurality of winding lengths" in claim 2, line 10 and claim 2, line 11 are related to the length of tape wound by the tape winding device. Claim 1, lines 12-13 only recites that the winding device winds a tape of the winding length. In addition, the language of claim 1, lines 12-13 and claim 1, lines 17-18 appears to be inconsistent or inaccurate since, based upon the disclosure, if the winding length of tape contains a defect, it would be discarded, not wound by the tape winding device.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 7-11, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Odaka (U.S. Patent No. 4,894,733) in view of Pugh (U.S. Patent No. 3,569,683).

Odaka discloses magnetic tape cutting-out equipment comprising: a tape supplying device (including 22), a tape winding device (including 32), a memory unit 34 storing tape defect position data, a winding length deciding unit (see 24, 251), a cutting device 232, and a cutting control unit.

Odaka does not disclose a winding length deciding unit that selects a first winding length if no defect is present in the length or selects another length if a defect is detected or calculates all combinations of winding lengths.

Pugh teaches selecting a first length of material to cut when no defect is detected in the first length of material and selecting other lengths to cut if a defect is detected in the first length of material in order to minimize waste. All combinations of a set of possible lengths are calculated to determine the combination that minimizes the remaining non-defective portion of material.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Odaka with a winding length deciding unit that selects a first winding length if no defect is present in the length or selects another length if a defect is detected or calculates all combinations of winding lengths as taught by Pugh to minimize waste of tape.

With regard to claims 5 and 19, it would have been obvious to calculate the ratio of used tape to the total tape on a pancake to determine the waste or yield of the machine since it well known to calculate production ratios and the like in order to monitor the efficiency of a manufacturing process.

Claims 1-5, 13-17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karaki et al (U.S. Patent No. 6,317,951) in view of Pugh.

Karaki et al discloses optical recording tape cutting-out equipment comprising: a tape supplying device 70, a tape winding device 22, a memory unit storing tape defect position data 344, a winding length deciding unit (within management computer 340; col. 12, line 66-col 3, line 8), a cutting device 80, and a cutting control unit.

Karaki et al does not disclose a winding length deciding unit that selects a first winding length if no defect is present in the length or selects another length if a defect is detected or calculates all combinations of winding lengths.

Pugh teaches selecting a first length of material to cut when no defect is detected in the first length of material and selecting other lengths to cut if a defect is detected in the first length of material in order to minimize waste. All combinations of a set of possible lengths are calculated to determine the combination that minimizes the remaining non-defective portion of material.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Karaki et al with a winding length deciding unit that selects a first winding length if no defect is present in the length or selects another

length if a defect is detected or calculates all combinations of winding lengths as taught by Pugh to minimize waste of tape.

With regard to claims 5 and 19, it would have been obvious to calculate the ratio of used tape to the total tape on a pancake to determine the waste or yield of the machine since it well known to calculate production ratios and the like in order to monitor the efficiency of a manufacturing process.

Allowable Subject Matter

Claims 6, 12, and 18 are allowed.

Response to Arguments

Applicant's arguments filed 5/20/05 have been fully considered but they are not persuasive.

Applicant argues that there is no disclosure in Pugh that a winding length deciding unit makes any determinations regarding the presence or absence of a defect in a set winding length. However, it is noted that the winding length deciding unit of Applicant's invention does not detect defects in the tape. Rather, a tape scanning apparatus analyses the tape and supplies data consisting of the positions of defects in the tape to the winding length deciding unit. In Pugh, the positions of material defects are determined manually and entered into a winding length deciding unit one at a time. From this position information, Pugh does determine whether a defect would occur in a piece of material of a given length and, if it would, selects a smaller length to be cut. In

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the example discussed at col. 12, line 50 through col. 14, line 26 of Pugh, the computer (winding length deciding unit) instructs the operator to cut 80, 71, and 71 inch pieces of material from a segment of a roll of material in which a defect is present 226 inches from the end of the material. Selected lengths up to 107 inches are permitted in this example, but the computer determines that if any of these pieces were made longer than the stated lengths, the last one would contain the defect (i.e., the total length would be longer than 226, the distance from the end to the defect). Pugh suggests modification of the winding length deciding unit of Odaka to permit the cutting and winding apparatus of Odaka to cut shorter lengths of tape when defects in the tape prevent longer ones from being cut in order to more efficiently use the tape, i.e., reduce the amount of waste.

Contrary to Applicant's assertion, Odaka and Pugh are not directed to obtaining opposite results. There is merely a difference in the absolute lengths of material cut in the particular embodiments described. Both take material from a supply, locate defects, cut the material to obtain non-defective pieces to be used, and discard defective portions.

Applicant argues that claim 5 requires more than calculation of a ratio of usable to unusable tape. However, no other ratios are recited in the claim. The claim recites a ratio computing unit which obtains a ratio of usable tape. The usable tape is based on the combination of the winding lengths calculated by the computing unit (which combination results in the least waste).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

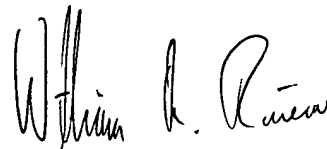
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Haugland whose telephone number is (571) 272-6945. The examiner can normally be reached on Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathy Matecki can be reached on (571) 272-6951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


sjh
8/8/05



WILLIAM A. RIVERA
PRIMARY EXAMINER